



CITY COUNCIL

AGENDA REQUEST

AGENDA OF:	07-06-10	AGENDA REQUEST NO:	III-C
INITIATED BY:	PETE POLITO, PROJECT MANAGER	RESPONSIBLE DEPARTMENT:	UTILITIES
PRESENTED BY:	IDAHOSSA IGBINOBA, RS, PMP, IUI ENGINEER I	DEPARTMENT HEAD:	SUE ELLEN STAGGS, DIRECTOR OF PUBLIC WORKS <i>EMS</i>
		ADDITIONAL DEPARTMENT HEAD (S):	CHRISTOPHER STEUBING, P.E. CFM, CITY ENGINEER <i>CLS</i>
SUBJECT / PROCEEDING:	ST. MICHAELS, MEADOW LAKES, WHIMBREL & HORSESHOE LIFT STATIONS WW1002 REALLOCATION OF FUNDS AND APPROVAL OF ENGINEERING SERVICE CONTRACT		
EXHIBITS:	COVER PAGE OF CONTRACT WITH ENGINEER'S PROPOSAL VENDOR PROPOSAL LOCATION MAP PHOTOS		
CLEARANCES		APPROVAL	
LEGAL:	JOE MORRIS, CITY ATTORNEY <i>JCM for JDM</i>	EXECUTIVE DIRECTOR:	N/A
PURCHASING:	TODD REED, PURCHASING MANAGER <i>(P)</i>	ASST. CITY MANAGER:	KAREN DALY <i>kd</i>
BUDGET:	JENNIFER BROWN, <i>JB</i> BUDGET & RESEARCH DIRECTOR	CITY MANAGER:	ALLEN BOGARD <i>QB</i>
BUDGET			
EXPENDITURE REQUIRED: \$		112,229	
CURRENT BUDGET: \$		64,396	
ADDITIONAL FUNDING: \$		47,833 FROM WW0605	
RECOMMENDED ACTION			
Reallocate \$47,833 from WW0605 (East & West Interceptor Rehabilitation – Phase 1) to WW1002 (Lift Station Rehabilitation) and authorize the execution of an engineering services contract with Sander Engineering, Inc., for final design of the St. Michaels, Meadow Lakes, Whimbrel & Horseshoe Lift Stations Rehabilitation in a maximum amount of \$112,229.			

EXECUTIVE SUMMARY

Annually, the City budgets money for rehabilitation of two to three of the City's 101 wastewater collection system lift stations, dependent on size and station condition. This year, the Utilities Department identified four lift stations for rehabilitation: the St. Michaels, Meadow Lakes, Whimbrel and Horseshoe lift stations.

A preliminary engineering report (PER) performed by Sander Engineering in March 2010 confirmed the Utilities Department's recommendation for rehabilitation of the four stations. Sander's evaluation found the lift stations to have severe corrosion and electrical code violations (see photos) that need urgent attention. The budgeted PER/design amount for FY10 was \$75,000, with \$10,604 of this amount expended on the PER, a balance of \$64,396 remains. Sander Engineering has submitted a final design proposal for the four lift stations in the amount of 112,229. The Utilities and Engineering Departments recommend reallocation of \$47,833 to complete the design phase of the project. The departments are recommending the four lift stations be rehabilitated at this time to avoid continued deterioration of the stations that may result in failure and higher repair costs and to comply with electrical codes for efficient operation and safety of operational staff. Moving forward with all four stations at this time will allow simultaneous design and construction of all four stations and also take advantage of current low construction price levels and economies of scale.

All four lift stations will require major rehabilitation/construction and are nearing the end of their service life. The project specifics are as follows:

- Located on Commonwealth Boulevard at St. Michaels Court, the St. Michaels lift station is a submersible pump station constructed in 1987. It is a very large four-pump station with a service area of over 2,000 equivalent single family connections (ESFC), which includes contributing flow from several upstream lift stations. Replacement of four pumps, severely corroded piping & motor control center (MCC), electric service drop and recoating of the large wet well structure is needed. Also to reduce corrosion in the future, modifications to the discharge piping, abandoning the below grade valve vault, and moving the valves and piping above ground will be completed.
- Located on First Colony Boulevard at Meadow Lakes, the Meadow Lakes lift station was constructed around 1981 and has a service area of 700 ESFC. The electric service drop for the station is located across the street from the station, which does not meet electric code. A new service drop and main disconnect will be relocated to the lift station site. Replacement of the pumps, corroded piping & MCC, hatches, recoating of the wet well structure and fence replacement is needed. Abandonment of the below grade valve vault and moving the valves and piping above ground will also be completed.
- Located in the Sugar Lakes subdivision on Whimbrel and Oyster Creek Drive, the Whimbrel lift station was constructed around 1982 and has a service area of 161 ESFC. Replacement of the pumps, corroded piping & MCC, hatches, recoating of the wet well structure, and modifying the valves and piping to above ground, similar to St. Michaels & Meadow Lakes will be completed. The station also needs fence replacement and landscaping.
- Located in the Alkire Lake subdivision at West Alkire Drive and Horseshoe Drive, the Horseshoe lift station was constructed around 1975 and has a service area of 37 ESFC. Replacement of the pumps, corroded piping & MCC, hatches, and recoating of the stations wet well structure is needed.

Based on the firm and the project manager's previous experience with similar projects, Sander Engineering was selected for the preliminary engineering (PER) phase of the project from the City's library of pre-qualified firms. The Utilities Department was pleased with the PER and recommends moving forward with Sander Engineering on

the design phase. Accordingly, the Department solicited a proposal from Sander Engineering to provide engineering services for rehabilitation of the four lift stations. The contract scope of work for this project includes the following services:

Basic Engineering Services & Design Phase Services

- Prepare Design Plans, Technical Specifications and Special Conditions to contract documents
- Prepare Itemized Bid Form and Proposal
- Prepare Final Construction Estimate
- Surveying

Currently there is a total of \$64,396 available in the Capital Improvement Program No. WW1002 for engineering services related to the project. Based on Sander's proposal, which calls for an estimated six-month design completion, it is anticipated that construction will begin in March 2011 to be completed in November 2011. Construction funding has been identified in the CIP for FY11.

The Utilities and Engineering Departments recommend the City Council reallocate \$47,833 from recently completed East & West Interceptor Rehabilitation Project WW0605 to WW1002 and authorize the execution of an engineering services contract with Sander Engineering, Inc., for Final Design of the St. Michaels, Meadow Lakes, Whimbrel & Horseshoe Lift Stations Rehabilitation in a maximum amount of \$112,229.

EXHIBITS

**CITY OF SUGAR LAND STANDARD CONTRACT
FOR PROFESSIONAL ENGINEERING DESIGN
SERVICES FOR CITY FACILITIES**

Form Revised 3/1/10

I. General Information and Terms.

Engineer's Name and Address: Sander Engineering Corporation
10555 Richmond Avenue, Suite 100
Houston, TX 77042

Project Description: Final Design & Survey for Rehabilitation of the St.
Michael, Meadow Lakes, Whimbrel & Horseshoe Lift
Stations – CIP No. WW1002

Maximum Contract Amount: \$112,229

Effective Date: On the latest date of the dates executed by both parties.

Termination Date: (See III F)

Contract Parts: This Contract consists of the following parts:

- I. General Information and Terms
- II. Signatures
- III. Standard Contractual Provisions
- IV. Additional Terms or Conditions
- V. Additional Contract Documents

II. Signatures. By signing below, the City and the Engineer agree to the terms of this Contract, which consists of the following parts:

CITY OF SUGAR LAND

ENGINEER:

City Manager or Assistant City Manager

By: _____

David L. Sander
President
SANDER ENGINEERING CORPORATION

Date: _____

Date: 5/12/10

Reviewed for Legal Compliance:

Jon M. ...

SANDER ENGINEERING CORPORATION

CONSULTING ENGINEERS - SURVEYORS
TEXAS BOARD OF PROFESSIONAL ENGINEERS PERM NO. F-507

10555 RICHMOND AVE., SUITE 105
HOUSTON, TEXAS 77042

DENNIS W. SANDER, P.E.
President

713-784-4639
FAX 713-784-4662

May 5, 2010

Mr. Pete Polito
CIP Project Manager
City of Sugar Land Public Works
111 Gillingham Lane
Sugar Land, Texas 77478

Re: Engineering design Services for St. Michael's Lift Station, Meadow Lakes Lift Station,
Wimbrel Lift Station, and Horseshoe Lift Station
City of Sugar Land
CIP: WW1002 Design Phase

10-053

Dear Mr. Polito,

Sander Engineering Corporation (SEC) is pleased to submit this proposal for engineering design services associated with the above referenced project. This proposal is based on our findings and recommendations presented in the *Facilities Assessment at St. Michael's Lift Station, Meadow Lakes Lift Station, Wimbrel Lift Station, and Horseshoe Lift Station*, dated March 25, 2010. This proposal includes costs associated with design phase services and bid phase services. This proposal excludes bid phase services and engineering services during construction. The following is a breakdown of the basic design services fee and additional services fee per lift station.

A. St. Michael's Lift Station

1. The Basic Design Services fee for St. Michael's Lift Station is \$34,026.00 and was determined as follows:

Preliminary Estimate of Probable Construction Cost (See Attachment A)	\$327,175.00
Engineering Fee (10.4% of probable construction cost)	<u>\$34,026.00</u>

2. The Additional Services fee is estimated to be \$2,750.00 and was determined as follows:

a. Topographic surveys for design.

Proposal prepared by Western Group Consultants, Inc.
dated April 13, 2010.

\$2,500 x 1.1 =	\$2,750.00
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Total Estimated Cost for Additional Design Services:	<u>\$2,750.00</u>
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B. Meadow Lakes Lift Station

1. The Basic Design Services fee for Meadow Lakes Lift Station is \$27,209.00 and was determined as follows:

Preliminary Estimate of Probable Construction Cost (See Attachment A)	\$261,625.00
Engineering Fee (10.4% of estimated construction cost)	<u>\$27,209.00</u>

2. The Additional Services fee is estimated to be \$4,100.00 and was determined as follows:

- a. Topographic surveys for design.

Proposal prepared by Western Group Consultants, Inc.
 dated April 13, 2010.

\$3,728 x 1.1 =	\$4,100.00
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Total Estimated Cost for Additional Design Services:	<u>\$4,100.00</u>
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C. Horseshoe Lift Station

1. The Basic Design Services fee for Horseshoe Lift Station is \$16,146.00 and was determined as follows:

Preliminary Estimate of Probable Construction Cost (See Attachment A)	\$155,250.00
Engineering Fee (10.4% of estimated construction cost)	<u>\$16,146.00</u>

2. The Additional Services fee is estimated to be \$5,300.00 and was determined as follows:

- a. Topographic surveys for design.

Proposal prepared by Western Group Consultants, Inc.
 dated April 13, 2010.

\$4,848 x 1.1 =	\$5,300.00
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Total Estimated Cost for Additional Design Services:	<u>\$5,300.00</u>
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D. Wimbrel Lift Station

1. The Basic Design Services fee for Wimbrel Lift Station is \$18,598.00 and was determined as follows:

Preliminary Estimate of Probable Construction Cost (See Attachment A)	\$178,825.00
Engineering Fee (10.4% of estimated construction cost)	<u>\$18,598.00</u>

2. The Additional Services fee is estimated to be \$4,100.00 and was determined as follows:

- a. Topographic surveys for design.

Proposal prepared by Western Group Consultants, Inc.
 dated April 13, 2010.

\$3,728 x 1.1 =	\$4,100.00
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Total Estimated Cost for Additional Design Services:	<u>\$4,100.00</u>
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Sander Engineering Corporation

City of Sugar Land
Mr. Pete Polito
May 5, 2010
Page 3 of 3

From the foregoing, our total anticipated fee is:

Basic Engineering Design Services Fee:	\$95,979.00
Additional Design Services:	<u>16,250.00</u>
Total Fee:	<u>\$112,229.00</u>

The proposals from the above mentioned sub-consultants are attached.

Geotechnical Investigation and Urban forestry services are not expected to be required for this contract. If such services are determined to be required at a later date, a supplemental proposal will be submitted at that time.

Traffic control design and storm water pollution prevention plans are not included in the proposal. These items will be addressed in the City's standard specifications.

This proposal has been prepared on the basis that the design for all four lift stations will be done under one design project and bid as one construction package.

A preliminary project schedule is provided as Attachment B.

We appreciate the opportunity to submit this proposal.

Very truly yours,



Dennis W. Sander, P.E.
President

DWS:em

Attachments:

Attachment A: Estimate of Probable Construction Cost
Attachment B: Preliminary Project Schedule

Proposal from Western Group Consultants

Sander Engineering Corporation

Attachment A
City of Sugar Land
ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Improvement	St Michaels	Meadow Lakes	Horseshoe	Wimbrel	Total
Pumps & Guide Rails	\$97,000	\$46,000	\$24,000	\$25,000	\$192,000
Discharge piping	\$65,000	\$35,000	\$15,000	\$17,000	\$132,000
Hatches & Nets	\$2,000	\$6,000	\$4,000	\$4,000	\$16,000
Wet Well coating	\$25,000	\$14,000	\$7,500	\$7,000	\$53,500
Electrical	\$77,000	\$73,000	\$55,000	\$65,000	\$270,000
Concrete Slab		\$12,000	\$8,000	\$8,000	\$28,000
Abandon Vault	\$8,500	\$6,000		\$6,000	\$20,500
Bypass Pumping	\$10,000	\$12,000	\$14,000	\$8,500	\$44,500
Fencing/landscaping		\$3,000	\$2,000	\$4,500	\$9,500
Parking		\$15,000		\$2,500	\$17,500
SCADA		\$5,500	\$5,500	\$5,500	\$16,500
Grout				\$2,500	\$2,500
Subtotal	\$284,500	\$227,500	\$135,000	\$155,500	\$802,500
Contingency (15%)					\$120,375
Total					\$922,875
w/15%	\$327,175	\$261,625	\$155,250	\$178,825	

ATTACHMENT "B" **SANDER ENGINEERING CORPORATION** **DESIGN SCHEDULE**

Owner: SUGARLAND
 Project: 2010 LIFT STATION IMPROVEMENTS

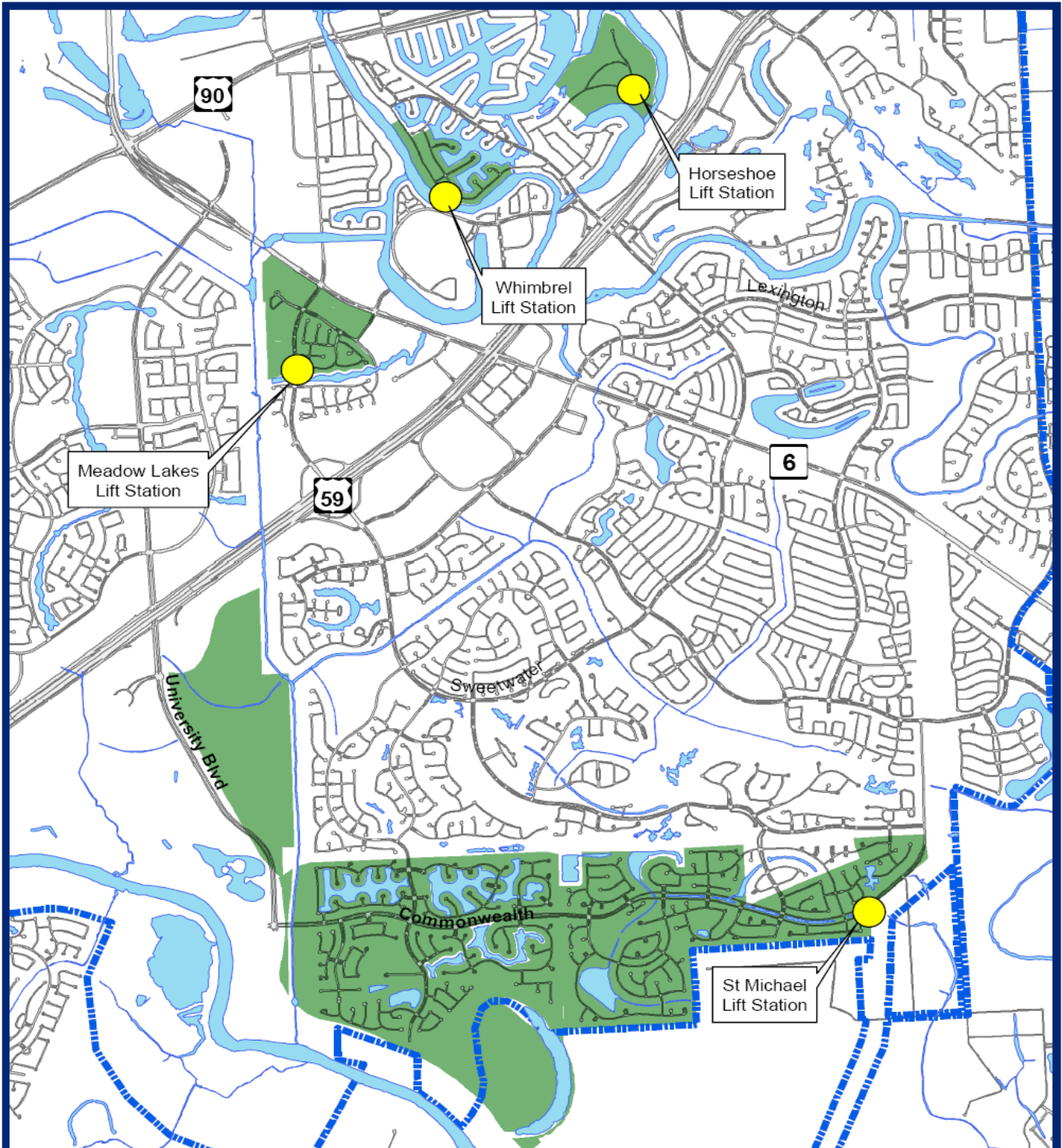
SEC. JOB NO. 10-053
 DATE: JUNE 9, 2010

ACTIVITIES	MONTH:	JULY 2010	AUGUST 2010	SEPT 2010	OCTOBER 2010	NOVEMBER 2010	DECEMBER 2010	JANUARY 2011	FEBRUARY 2011	MARCH 2011	APRIL 2011	MAY 2011	JUNE 2011	
	WEEKS:	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31												
PRELIMINARY DESIGN														
SURVEYING		////												
50% SUBMITTAL		//////////												
CITY REVIEW							////							
90% SUBMITTAL							//////////							
CITY REVIEW								////						
FINAL SUBMITTAL								//////////						
BID PHASE									//////////					

P: SUGARLAND SCHEDULE 10-053-SCHEDULE.DGN

NOTICE TO
 PROCEED
 JULY 14, 2010

PROPOSED //////////



CITY OF SUGAR LAND

Capital Improvement Program
2010 Lift Station Rehabilitation Project
CIP No. WW1002



St Michael's Valve Vault



St Michael's Wet Well



Meadow Lakes' Valve Vault



Meadow Lakes' Wet Well



Horseshoe Wet Well

Horseshoe Wet Well



Whimbrel Lift Station



Whimbrel Valve Vault



Whimbrel Wet Well

